

## **Chapter 6**

### **Special Management Areas**

#### **Public Outreach**

Public outreach into the identification of special management areas began at the ICMP kickoff meeting for municipal and government officials on January 25, 2005 at Gillson Park in the Village of Wilmette. A questionnaire was distributed at the meeting that asked for input on general resource areas and specific geographic areas that should merit special attention in developing and implementing a coastal management program for Illinois. The questionnaire also requested input on considerations in establishing the coastal boundary, on the need for increased public access, and to identify potential projects or needs that could be eligible for ICMP grant funding. The questionnaire was also sent out to a broad list of interest groups in April 2005.

In May and June of 2005, the IDNR met individually with the 15-shoreline municipalities and with the villages of Skokie and Lincolnwood to discuss the preliminary plans and goals for the ICMP. In July 2005, a meeting was held with the South Suburban Mayors and Managers Association representing the communities along the Little Calumet and the Grand Calumet Rivers. The focus of these meetings was to seek specific input on coastal boundary lines (roads) and on the areas meriting special program attention.

The first series of open house/workshops was held during July 2005 in Waukegan, Highland Park, and at Loyola University-Chicago Lake Shore campus, respectively. Another initial workshop was held in (south) Chicago on September 2005. A second series of workshops (4) was held at the same locations in November 2005.

#### **Collation of Issues and Areas Meriting Special Attention**

The IDNR received 35 responses to the questionnaire that served to develop a preliminary list of resource issues and geographic areas as the focus of attention for the ICMP. This input also aided in developing a preliminary coastal boundary. The questionnaire responses to the issues and areas of concern were sorted into groups in order to facilitate further discussion and details regarding a particular issue or area through preparation of an issue paper on the subject.

The “Resource Issues” identified as meriting special attention were grouped as follows:

- A. Water Quality
- B. Shoreline Erosion
- C. Habitat, Ecosystem and Natural Area Restoration
- D. Ravine Systems
- E. Public Access and Recreational Resources
- F. Historic and Cultural Feature Preservation
- G. Education and Public Awareness
- H. Land Acquisition/Easement Opportunities

The “Specific Geographic Areas” identified as meriting special attention were grouped as follows:

- I. North Point Marina and Illinois Beach State Park
- J. Waukegan Harbor, Waukegan Lakefront and Waukegan River Watershed
- K. Chicago River and North Shore Channel River Corridors, and Wilmette Harbor
- L. Lake Calumet and Calumet River Area
- M. Little Calumet and Grand Calumet River Corridors

## **Role of the Technical Advisory Groups (TAGs)**

The IDNR recommended the formation of Technical Advisory Groups (TAGs) to assist in developing issue papers with respect to the resource issues and geographic areas identified as meriting special program attention. The primary role for the TAGs was to identify the specific issues and provide the necessary details and considerations regarding the particular issue or area, answering why it merits special attention in the ICMP. Over 100 individuals signed up at the workshops to participate on at least one of the TAGs. There was a broad spectrum of participants, including representatives from city/county/state government, special interest groups, universities, along with property owners and local interested citizens.

TAG facilitators were identified to coordinate and receive input from the TAG participants and begin the preparation of the issue paper. In November 2005, the IDNR provided each TAG facilitator with a complete listing of TAG participants, showing title and work association, phone number, and e-mail address. A collated list of the questionnaire responses was provided along with directions and guidelines on how to proceed in developing the issue papers. References to program requirements were given to aid in understanding the purposes the issue papers would serve in developing the ICMP.

## **TAG Issue Paper Summary**

There were 11 issue papers prepared by the TAGs, which are included in Appendix D. Issue papers on “Water Quality” and on “Land Acquisition/Easement Opportunities” were not prepared. These issues are integral to every geographic area and most issue areas, and are addressed accordingly in those papers.

The Issue Papers contain opinions that may or may not be the policy of the IDNR or all the TAG representatives. As intended, the issue papers bring out concerns, management considerations and grant opportunities for these issues and geographic areas. They also provide analyses and discussions on interests of common consensus and areas of differing viewpoints. The issue papers are an excellent resource for the ICMP and provide a better understanding of planning and management needs, grant project needs, and the committees and resources that can assist in meeting those needs.

## **Program Requirements for APC and APR**

The CZMA program regulations under Subpart C “Special Management Areas” sets forth the requirements for management program approvability with respect to Areas of Particular Concern (APC) because of their coastal-related values or characteristics, or because they may face pressures which require detailed attention beyond the general planning and regulatory system which is part of the management program.

Section 923.20(b) of the CZMA regulations states *“Where a State's general coastal management policies and authorities address state and national concerns comprehensively and are specific with respect to particular resources and uses, relatively less emphasis need be placed on designation of areas of particular concern.”*

Section 923.21 requires *“The management program must include an inventory and designation of areas of particular concern within the coastal zone, on a generic and/or site-specific basis, and broad guidelines on priorities of uses in particular areas, including specifically those uses of lowest priority. In developing criteria for inventorying and designating areas of particular concern, States must consider whether the following represent areas of concern requiring special management:*

*(1) Areas of unique, scarce, fragile or vulnerable natural habitat; unique or fragile, physical, figuration (as, for example, Niagara Falls); historical significance, cultural value or scenic importance (including resources on or determined to be eligible for the National Register of Historic Places.);*

*(2) Areas of high natural productivity or essential habitat for living resources, including fish, wildlife, and endangered species and the various trophic levels in the food web critical to their well-being;*

*(3) Areas of substantial recreational value and/or opportunity;*

*(4) Areas where developments and facilities are dependent upon the utilization of, or access to, coastal waters;*

*(5) Areas of unique hydrologic, geologic or topographic significance for industrial or commercial development or for dredge spoil disposal;*

*(6) Areas or urban concentration where shoreline utilization and water uses are highly competitive;*

*(7) Areas where, if development were permitted, it might be subject to significant hazard due to storms, slides, floods, erosion, settlement, salt water intrusion, and sea level rise;*

*(8) Areas needed to protect, maintain or replenish coastal lands or resources including coastal flood plains, aquifers and their recharge areas, estuaries, sand dunes, coral and other reefs, beaches, offshore sand deposits and mangrove stands.”*

Section 923.22 addresses requirements for Areas for Preservation or Restoration (APR) as follows:

*“The management program must include procedures whereby specific areas may be designated for the purpose of preserving or restoring them for their conservation, recreational, ecological, historical or esthetic values, and the criteria for such designations.”*

### **APC and APR Analysis for ICMP Purposes**

Our coastal region is unique with respect to the numerous levels of governmental authorities and extensive public input involving development and land use decisions. Management policies, regulations, and programs for the protection and use of land and water resources within our coastal boundary exist at many governmental levels, and are both general and specific. Practically the entire inland coastal area is located within a municipal boundary. There are three ecosystem partnerships and numerous interest groups that routinely have the opportunity to provide input on coastal projects. Illinois has strong comprehensive authorities, programs and controls applied throughout the coastal area on both the state and local level.

APC establishment is intended to address the need for heightened or special management attention in the ICMP. It may include increased intergovernmental coordination, technical assistance, enhanced public expenditures, or additional public services and maintenance to a designated area. It also may include regulatory or permit requirements applicable only to the APC. In developing the issues and areas meriting special ICMP attention, no particular additional regulatory requirements were proposed or identified for consideration. Thus, the ICMP will focus on these areas and issues primarily through technical assistance, governmental coordination, and ICMP grants to assist in funding these objectives.

Many of the general issues and geographic areas identified as meriting special attention meet the federal examples of general areas of concern cited above for state consideration in inventorying APC. For

Illinois, the entire ICMP boundary can be considered “Areas or urban concentration where shoreline utilization and water uses are highly competitive.” Several areas provide essential habitat for wildlife and endangered species, provide areas of substantial recreational value and/or opportunity, and/or are dependent upon the utilization of, or access to our coastal waters. North Point Marina and Illinois Beach State Park encompass criteria for listing consideration with its significant habitat, endangered species, fragile environment, recreational value, and the need for protection of its beaches from shoreline erosion.

In order to identify the areas meriting special attention, the ICMP establishes “general” areas for APC and APR. The ICMP response to the need for increased or special management attention on general APC and APR include the following:

- A. ICMP staff will assist in coordinating efforts to bring together governmental units to address complex or specific issues pertaining to APC and APR. Assistance will be provided in identifying and coordinating existing initiatives and partnership opportunities. It will also include assistance on APC or APR of regional concern or interest requiring coordination among several governmental units. APC designation will increase the focus of attention the ICMP will give to these areas in providing technical assistance, governmental coordination, and/or ICMP grants in assisting to address the issues and significance of these areas. Assistance will be provided in developing a comprehensive needs survey or cost share agreements amongst various governmental entities.
- B. The ICMP grants program provides special consideration to the needs and projects identified as APC and APR. Grants for special projects, research, planning, data needs, inventory, monitoring, and technical assistance are some of the areas that will be eligible for grant funding of APC and APR. Chapter 9 describes the criteria for eligibility, review and grant selection process.

### **ICMP Inventory and Designation of APC and APR**

The following general APC are identified:

1. Areas and issues to protect or improve the water quality of Lake Michigan and inland coastal waterways
2. Areas of unique, scarce, fragile or vulnerable natural habitat, including areas of high natural productivity or essential habitat for living resources, including fish, wildlife, and threatened or endangered species
3. Areas of substantial recreational value or opportunity, including public access opportunities
4. Areas where development and facilities are dependent upon the use of, or access to, coastal waters for industrial or commercial development
5. Areas needed to protect, maintain or replenish coastal lands and significant resources subject to storms, floods, erosion, and settlement, including floodplains, wetlands, sand dunes, natural areas, offshore sand deposits, recreational areas, ports, lakefronts, marinas, public utilities, roads, infrastructure, and historic structures

The general APR will include areas of historical significance or cultural value.

## **General APC Descriptions**

This following describe the general APC where areas identified as meriting special program attention are included and appropriately categorized and mentioned. The description includes the nature of the concern and broad guidelines on priority considerations for ICMP assistance.

### **1. Areas and issues to protect or improve the water quality of Lake Michigan and inland coastal waterways**

Protecting and continuing to improve the water quality of Lake Michigan and the inland coastal waterways is critical to the long-term health and prosperity of Illinois' shoreline communities, its industries, and economy. The importance of high water quality for water supply, public health, habitat, recreation and aesthetics cannot be overstated. The central theme of the CZMA is to provide for the management of land and water uses having a direct and significant impact on coastal waters.

Water quality is a cardinal component for the majority of issues and all of the areas identified as meriting special program attention. Discussions on water quality are included in the issue papers on the inland waterways, Lake Calumet and the Waukegan River watershed. The breadth and depth of issues, studies, plans, and institutions involving water quality and their significance to our coastal region are immeasurable.

Water quality is included in the ICMP as a general APC to heighten the attention to water quality issues through ICMP assistance by way of coordination of governmental efforts and grants. Protection or improvement in water quality is obviously achieved through a reduction in pollution sources, such as point source discharges, road runoff, litter, abandoned landfills and industrial sites, and sailboat and powerboat sewage, to name a few. The "Chicago River and North Shore Channel Corridors" issue paper discusses the significance of the Tunnel and Reservoir Project (TARP), the MWRDGC water reclamation plants, and the water quality standards and issues for the Chicago area waterways. The "Lake Calumet and Calumet River" issue paper discusses the numerous abandoned industrial sites, landfills, and associated pollution sources present in the area. The "Little Calumet and Grand Calumet" paper also discusses these same issues and the significance of wastewater effluent representing the majority of flow in the Little Calumet during dry periods. The Waukegan Harbor, Lakefront and Watershed issue paper discusses the federal listing of the Waukegan Harbor as an Area of Concern (AOC) for PCBs. It also discusses the potential for sanitary sewer overflows into the Waukegan River during storm events.

Protection or improvement in water quality is also achieved through better stormwater and watershed management, such as through the protection or creation of wetlands, detention basins, aeration systems, and streambank stabilization. The "Ravine Systems" issue paper discusses the problems associated with rapid urban runoff and best management practices to slow the speed of runoff. Many ravines have historically been used as landfills. Stabilization of these ravines through e.g., revetment and/or vegetation could reduce erosion and the exposure of debris, and provide for unique plant communities and wildlife habitat. The lack of stormwater detention and the need for streambank stabilization and habitat improvement structures are also issues in the Waukegan River watershed.

With the intense use and demand for water dependent recreation, public health issues through water contact is a significant area of concern. Water quality monitoring and testing for fecal pollution is routinely conducted at public beaches during the swimming season by the Lake County Health Department and the Chicago Park District. Four of the beaches in Lake County are monitored through the utilization of SwimCast systems, which provide real-time conditions allowing for the most accurate and

timely decisions regarding the health of Lake County beaches. SwimCast measures various air and water quality conditions and parameters to help predict *E. coli* levels. The inland coastal waterways are also being used more often for secondary contact forms of recreation such as boating, kayaking, and fishing. Engineering analyses are underway to provide feasibility studies and cost analyses of various management options such as supplemental aeration, disinfection of wastewater discharges, and eliminating combined sewer overflows.

As projects are implemented, the focus and emphasis on some of the current water quality issues are likely to shift. New data may indicate the need to address other water quality issues of concern. New technologies, building designs, and transportation systems may necessarily develop to address the growing needs of the area. Though the specific issues and priorities will change, the demand for high water quality will only increase. A priority of the ICMP will be to assist in efforts that will lead to the protection and improvement in water quality.

## **2. Areas of unique, scarce, fragile or vulnerable natural habitat, including areas of high natural productivity or essential habitat for living resources, including fish, wildlife, and threatened or endangered species**

The number of TAG participants that signed up to assist in developing the “Habitat, Ecosystem and Natural Area Restoration” issue paper was greater than for any other TAG. This comes as no surprise due to the number of interest groups where habitat protection is a major focus. The interest in natural habitat area protection is amplified and often parallels the interest in increased outdoor recreational areas. Many of the nature preserves, natural areas and parklands contain walking trails and wildlife viewing areas that are appreciated by hikers and birders, or persons just looking for momentary sanctuary. In addition, these natural areas also provide significant water quality benefits with their wetlands and vegetation serving as infiltration and collection pockets assisting in stormwater management.

The variety of habitats found within the Lake Michigan coastal area is greater than any other area of the state. Almost three-fourth of Illinois’ threatened and endangered (T&E) bird species are found here. The coastal area contains the only high-quality beach habitat and high-quality foredune, and more than half the remaining high-quality prairie. Many plant species and entire plant communities only exist within this area.

Illinois has been a national leader in its programs and efforts to protect its most rare natural areas. In 1963, legislation was signed creating the Illinois Nature Preserves Commission (INPC), making Illinois the first state to develop a comprehensive statewide program called the Illinois Nature Preserves System for permanently protecting ecologically important natural areas. These last remaining remnants of our state’s natural heritage are less than 0.1% of the landscape remains as it did when first seen by Illinois’ early settlers. Permanently protected by state law, nature preserves are private and public lands that have rare plants, animals, or other unique natural features. Ranging in size from one acre to more than 2,000 acres, nature preserves protect tall grass prairies, oak groves, sandstone bluffs, wetlands, bogs and other threatened natural areas. Currently, nature preserves protect over 900 occurrences of endangered and threatened plants and animals and contain more than 20% of all Illinois endangered species. This commitment to preserve the state’s rare natural treasures made Illinois the first state to create such an innovative land protection program. The INPC is now a national model.

Many private landowners who have a rare natural area decide to dedicate their property as a nature preserve. Nature preserves landowners retain title to their land, have their property tax reduced by changing the assessed value to \$1 per acre, and receive stewardship assistance. Options available to landowners include nature preserve dedication, land and water reserve registration or enrollment as an Illinois natural heritage landmark. The Illinois Natural Areas Preservation Act [525 ILCS 30] governs the

INPC and charges it to preserve, protect and defend natural areas and endangered species habitat for public benefit.

A portion of Illinois Beach State Park became the first nature preserve in 1964. Since then, the INPC's protection has expanded to 71,700 acres of private and public land in 93 of Illinois' 102 counties. Nature preserves provide unique opportunities for recreation, critical scientific study and education. Many publicly owned nature preserves are open to the public for hiking and watching nature. Each year the INPC issues 400-500 research permits for biologists, scientists, and students to study and monitor rare species of plants and animals. This research can lead to improved ways to protect endangered plants and animals. The nature preserves system serves as a natural storehouse of genetic material, some of which could provide the chemical basis for new drugs and medicines. While protecting the last few remnants of our state's natural heritage, nature preserves also provide living classrooms to benefit future generations.

Illinois Nature Preserves Commission (INPC) areas located within the ICMP boundary are as follows:

Burnham Prairie Nature Preserve  
Illinois Beach Nature Preserve  
Lyons Prairie and Woods Nature Preserve  
North Dunes Nature Preserve  
Powderhorn Prairie and Marsh Nature Preserve  
Spring Bluff Nature Preserve

In 1978, Illinois completed the nation's first Natural Areas Inventory to document remaining natural communities and rare species habitats. The Illinois Natural Areas Inventory (INAI) is a comprehensive effort to find, evaluate, describe, and classify the best examples of Illinois' natural heritage, including high quality natural communities and endangered habitats. INAI areas are "environmentally sensitive resources" that are considered to be "irreplaceable assets" of the state. All state agencies and local governments in Illinois are required by law to consult with the IDNR whenever actions that could jeopardize these resources are contemplated. The INAI serves as a guide for the INPC when determining the eligibility of lands for protection. The INAI served as a prototype for many other states.

Currently there are only 654 high quality undisturbed natural communities in the state. Approximately half of these areas are unprotected and are in danger of being destroyed. Each year, 12 to 15 new nature preserves are dedicated after a thorough and detailed study of an area protecting them into the future. Although the IDNR updates the INAI quarterly, a more extensive update is being made to take advantage of the new knowledge and scientific discoveries made in the last 25 years about landscape science, restoration, and the dynamics of wildlife corridors. The new inventory will identify local and statewide areas of significance, and consider the potential for restoring natural areas. A Geographical Information System will be used for recording and protecting information about the site and a website will be created where the public can access site information and area partnerships.

Illinois Natural Areas Inventory (INAI) sites located within the ICMP boundary are as follows:

130th Street Marsh	Illinois Dunes North
Blair Woods	Lake Bluff Woods
Blodgett Bluff	Lake Calumet
Burnham Prairie	Lyons Woods
Crabtree Farm Woods	McCormick Ravine
Dolton Avenue Prairie	Montrose Beach Dune
Fort Sheridan Bluff	Powderhorn Lake and Prairie
Fort Sheridan Site	Ravinia Bluff
Glencoe Botanical Area	Waukegan Beach

A state-of-the-environment report published in 1994, titled “The Changing Illinois Environment: Critical Trends,” concluded that ecosystems in Illinois are deteriorating and their natural functions are being disrupted by fragmentation and stress. This report recommended that the state begin collecting statewide data on both the extent and condition of its ecosystems in order to determine the most effective and economical natural resources policy. Thus, the IDNR created the Critical Trends Assessment Program (CTAP) that developed the data collection tools and programs needed to monitor trends in Illinois ecosystems. CTAP completed an atlas of Illinois land cover, an inventory of resource rich areas, and 30 regional watershed assessments. The team consists of staff from IDNR’s Office of Realty and Environmental Planning, Illinois Natural History Survey, Illinois State Geological Survey, Illinois State Water Survey, Illinois Waste Management and Research Center, and the Illinois State Museum.

The inventory of resource rich areas helped to establish priorities for the state’s Conservation 2000 Ecosystems Program. Most of the program’s Ecosystem Partnerships have at their core a resource-rich area. Ecosystem Partnerships are made up of individuals and interest groups that work together to maintain and enhance ecological and economic conditions within a defined boundary. The Ecosystem Partnerships that are working within the ICMP boundary are the Lake Michigan Watershed, Chicago Wilderness, and Lake Calumet. As Ecosystem Partnerships were formed, CTAP prepared regional “Critical Trends” reports for their areas. Usually based on watershed boundaries, the reports describe an area’s geology, water resources, living resources, socio-economics, environmental quality, and archaeological resources. They are designed to provide the baseline information the partnerships need to set priorities and develop management plans.

Two assessment reports have been prepared on areas within the ICMP boundary. *The Chicago River/Lake Shore: An Inventory of the Region’s Resources* (October 2004) provides an excellent discussion on the various terrains and natural habitats which evolved, and the nature preserves and natural areas which exist today, along with a description of the current threats to these natural communities. The other report is titled *The Calumet Area: An Inventory of the Region’s Resources*. This report includes a description of changes in this region’s prairies, rivers, streams, lakes, wetlands, forests, and savannas. It also included sidebars on the black-crowned night herons, exotic species invasion, and dedicated nature preserves in the area. Another excellent report used as reference in this section is *The Illinois Steward, Discovering Our Place in Nature* (Volume 14, No. 4, Winter 2006) published by the University of Illinois at Urbana-Champaign, the Illinois-Indiana Sea Grant College Program, and the Illinois Natural History Survey. This report provides an overview of the history of transformations of the Chicago River, highlights nature preserves within its watershed, and the change in social attitudes toward the river. It also discusses the current challenges posed by invasive species and recent efforts to improve the river to meet the growing demands of its urban setting.

CTAP has developed a long-term monitoring network that will provide current information on the condition of the major natural ecosystems. This information will support efforts to preserve, restore, and manage ecosystems across the state. Under the CTAP monitoring plan, CTAP scientists from the Natural History Survey conduct detailed biological inventories of 150 randomly selected sites (30 per year rotating on a five-year cycle) for each of four habitat types—forests, streams, wetlands and grasslands. CTAP measures ecological indicators such as the presence of threatened and endangered species, species richness, species diversity, and dominance of native vs. non-native species. In streams, aquatic insects are the primary assemblage used as indicators of condition. CTAP seeks to develop a base of practical, real-world information that will help shape effective and economical environmental policies for the future on a sound ecosystem basis.

Trained volunteers in the EcoWatch network carry out less detailed biological surveys at several hundred sites. Together the two groups collect a representative set of biological indicators that measure environmental quality. The indicators include information on plants, birds, fishes and aquatic insects that will track changes in the four ecosystems. As data accumulates over the years, regional and statewide trends will become apparent.

Some general findings and issues applicable statewide and within the ICMP boundary include:

Habitat fragmentation is a widespread threat to ecosystem functioning and could limit attempts to maintain and enhance biodiversity. The splintering of wetlands, prairies, and forests into fragments makes it harder for small, isolated populations of plants and animals to breed. It also leaves them vulnerable to accidental eradication through fire or other mishap. Competition from exotic species often increases as well when contiguous habitats are split by development. By 1976, less than 1/100th of 1%, or 2,352 acres, of high-quality original prairie remained in Illinois. Four of every five remaining acres of prairie are less than ten acres in size. The result is a trend toward a generic environment populated mainly by "generalist" species able to exploit simplified ecosystems. Habitat fragmentation and competition from exotic species have combined to render once-stable ecosystems less so. Complexity lingers mainly in habitats of only marginal use to humans, such as river bottomlands, swamps, hillsides and bogs.

Urban Sprawl - Illinoisans are arraying themselves on the land in suburban densities. By 1990, Illinois' urban fringe had grown to house 37% of the state's population. The trend has had effects on air quality, petroleum consumption, and land use that are disproportionate to the population. Physical, rather than chemical, changes are probably the most perturbing force in Illinois stream ecology today. Urbanization is encroaching on Illinois streams and widespread channelization has altered water flow.

Most streams that drain prairie landforms have been straightened, their canopies removed, and the watersheds tiled to drain fields more quickly. The data collected by CTAP scientists and RiverWatch volunteers point out that most streams lack natural habitat features such as wooded riparian corridors, winding stream channels, and stable in-stream habitat such as coarse rocks and wood debris. Restoring native vegetation along streams would shade the streams, stabilize banks, and filter sediment and chemicals from runoff before they reached the streams, resulting in less siltation and desiccation and lower water temperatures.

Illinois wetlands harbor a great wealth of biological diversity and include many different environments, such as wet sand prairie, marsh and sedge meadow. An estimated 64 percent of Illinois' threatened or endangered species inhabit wetlands. Pre-settlement wetlands constituted one acre in every five in Illinois; wetlands have since dwindled to 918,000 acres, of which only 6,000 acres are undisturbed. Recent laws have slowed the rate of wetlands destruction, and federal rules have led to the mitigation of wetland losses by the construction or restoration of wetlands. Unfortunately, even intact wetlands remain vulnerable to invasion by pollutants, sediments and exotic species. Artificial wetlands to date have duplicated neither the biological diversity nor the hydrological complexity of natural wetlands.

Introductions of non-native species are a growing threat to native populations. These species have rendered the ecology of our Lake Michigan coastal zone unstable. Native mussels are threatened by accidentally introduced zebra mussels. Invasions by exotic or invasive plants and insect species are increasing in severity and scope. The movement threat of Asian carp and other species and viruses between the Great Lakes and the Illinois/Mississippi River system is of great concern.

Lake and Cook counties contain one of the richest variety and concentrations of habitats in the state. Beach and foredune habitat are found nowhere else in Illinois. The area contains about 55 percent of the

all-remaining high-quality sand prairie. Illinois Beach State Park contains the largest undeveloped single tract of coastal habitat left. Its 6.5 miles of shoreline and the Illinois Beach and North Dunes nature preserves contain unique coastal beach ridge and swale topography, includes 14 high quality natural communities and at least 31 state threatened or endangered species. The area contains 1,153 acres of wetland that have not been degraded. The prairie habitat found at Spring Bluff Forest Preserve provides for a diverse habitat and home to many bird species found nowhere else in the area. The Lake Michigan bluff ravine system may contain as many as 16 state threatened or endangered species supported by the unique wetland habitat created by seepage exiting into the ravines. Remnant prairie and wetland systems exist throughout the Lake Calumet area. The Lake Michigan shoreline is especially important for bird migratory stopover habitat, such as found at Montrose Point. Other important habitat areas are discussed in the CTAP assessment reports, the TAG issue papers and other reference documents.

**Endangered and Threatened Species** located within the ICMP boundary are as follows:

<b>Scientific Name</b>	<b>Common Name</b>
<i>Aflexia rubranura</i>	Redveined Prairie Leafhopper
<i>Agalinis skinneriana</i>	Pale False Foxglove
<i>Amelanchier sanguine</i>	Shadbush
<i>Ammodramus henslowii</i>	Henslow's Sparrow
<i>Ammophila breviligulata</i>	Marram Grass
<i>Arctostaphylos uva-ursi</i>	Bearberry
<i>Aster furcatus</i>	Forked Aster
<i>Bartramia longicauda</i>	Upland Sandpiper
<i>Bolboschoenus maritimus</i>	Alkali Bulrush
<i>Cakile edentula</i>	Sea Rocket
<i>Calopogon tuberosus</i>	Grass Pink Orchid
<i>Carex aurea</i>	Golden Sedge
<i>Carex garberi</i>	Sedge
<i>Carex viridula</i>	Little Green Sedge
<i>Castilleja sessiliflora</i>	Downy Yellow Painted Cup
<i>Catostomus catostomus</i>	Longnose Sucker
<i>Ceanothus herbaceous</i>	Redroot
<i>Chamaesyce polygonifolia</i>	Seaside Spurge
<i>Chlidonias niger</i>	Black Tern
<i>Cirsium pitcher</i>	Pitcher's (Dune) Thistle
<i>Clonophis kirtlandi</i>	Kirtland's Snake
<i>Cypripedium candidum</i>	White Lady's Slipper
<i>Drosera rotundifolia</i>	Round-leaved Sundew
<i>Egretta caerulea</i>	Little Blue Heron
<i>Egretta thula</i>	Snowy Egret
<i>Eleocharis olivacea</i>	Spikerush
<i>Eleocharis pauciflora</i>	Few-flowered Spikerush
<i>Elymus trachycaulus</i>	Bearded Wheat Grass
<i>Emydoidea blandingii</i>	Blanding's Turtle
<i>Etheostoma exile</i>	Iowa Darter
<i>Falco peregrines</i>	Peregrine Falcon
<i>Fundulus diaphanous</i>	Banded Killifish
<i>Gallinula chloropus</i>	Common Moorhen
<i>Haliaeetus leucocephalus</i>	Bald Eagle

*Hypericum kalmianum*  
*Incisalia polios*  
*Ixobrychus exilis*  
*Juncus alpinoarticulatus*  
*Juniperus communis*  
*Juniperus horizontalis*  
*Kinosternon flavescens*  
*Lathyrus ochroleucus*  
*Lechea intermedia*  
*Lycaeides melissa samuelis*  
*Menyanthes trifoliata*  
*Notropis heterodon*  
*Nyctanassa violacea*  
*Nycticorax nycticorax*  
*Oenothera perennis*  
*Orobanche fasciculata*  
*Paraphlepsius lupalus*  
*Phalaropus tricolor*  
*Pinus banksiana*  
*Platanthera clavellata*  
*Platanthera flava* var. *herbiola*  
*Platanthera leucophaea*  
*Platanthera psycodes*  
*Poa alsodes*  
*Poa languid*  
*Polygonatum pubescens*  
*Populus balsamifera*  
*Potamogeton gramineus*  
*Potamogeton robbinsii*  
*Rhynchospora alba*  
*Rubus odoratus*  
*Rubus pubescens*  
*Salix syrticola*  
*Scirpus microcarpus*  
*Shepherdia Canadensis*  
*Spermophilus franklinii*  
*Spiranthes lucida*  
*Sterna hirundo*  
*Tofieldia glutinosa*  
*Triglochin maritime*  
*Triglochin palustris*  
*Utricularia cornuta*  
*Utricularia intermedia*  
*Utricularia minor*  
*Veronica scutellata*  
*Viola conspersa*  
*Xanthocephalus*

Kalm's St. John's Wort  
 Hoary Elf  
 Least Bittern  
 Richardson's Rush  
 Ground Juniper  
 Trailing Juniper  
 Illinois Mud Turtle  
 Pale Vetchling  
 Pinweed  
 Karner Blue Butterfly  
 Buckbean  
 Blackchin Shiner  
 Yellow-crowned Night Heron  
 Black-crowned Night Heron  
 Small Sundrops  
 Clustered Broomrape  
 Leafhopper  
 Wilson's Phalarope  
 Jack Pine  
 Wood Orchid  
 Tubercled Orchid  
 Eastern Prairie Fringed Orchid  
 Purple Fringed Orchid  
 Grove Bluegrass  
 Weak Bluegrass  
 Downy Solomon's Seal  
 Balsam Poplar  
 Grass-leaved Pondweed  
 Fern Pondweed  
 Beaked Rush  
 Purple-flowering Raspberry  
 Dwarf Raspberry  
 Dune Willow  
 Bulrush  
 Buffaloberry  
 Franklin's Ground Squirrel  
 Yellow-lipped Ladies' Tresses  
 Common Tern  
 False Asphodel  
 Common Bog Arrow Grass  
 Slender Bog Arrow Grass  
 Horned Bladderwort  
 Flat-leaved Bladderwort  
 Small Bladderwort  
 Marsh Speedwell  
 Dog Violet  
 Yellow-headed Blackbird

### **3. Areas of substantial recreational value or opportunity, including public access**

Recreational resources within the Illinois coastal zone are critical to the quality of life in the area. The combined population of Cook and Lake Counties is over 6 million and is projected to grow to 6.8 million by 2030. Recreation and public access to the recreational coastal areas not only serve the local residents but also the numerous visitors to the Chicago metropolitan area. Many of the communities already have planning documents that address recreation and public access needs. Planning efforts by communities to increase and improve upon recreational resources such as lakeshore parks and open space along the Illinois coast are ongoing. The ICMF can assist coastal communities by building upon their planning efforts and in seeking out opportunities to provide public access and recreational resources. The ICMF can provide a unique role for obtaining assistance in integrating desired broad based or regional recreation and public access goals with neighboring municipalities into a regional framework or plan.

Chapter 5 and the *Public Access and Recreational Resources* issue paper (Appendix B) provide excellent descriptions of the existing recreational resources, and issues requiring special program attention and assistance. Several considerations discussed in these documents are summarized as follows:

- Recreation interests in this urban coastal setting are very diverse and include areas and activities that are water dependent or trail dependent, for nature viewing or retreat, trail use, or which support outdoor and public events. The challenge in the stewardship and development of the Illinois coastal zone is to provide for this diversity of access and recreation interests.
- Improving public access may need to take multiple approaches to assure that the greatest number of citizens can benefit. These may include improvements in public transportation, parking for vehicles and bicycles, accessibility for seniors and persons with a disability, accessibility over major roadways and tracks, and trails which link parks, beaches and recreation areas. Providing safe access for pedestrians between the bluff portions of lakeshore parks down to the beach portions is also needed. Trail improvements are also needed within many of the ravine parks.
- Access and recreational opportunities should be enhanced and expanded to the highest degree possible, but the goal is certainly not to create unrestricted access to all public areas. Prudent stewardship requires restricted or denied access and recreational uses in certain areas for reasons such as site preservation, habitat restoration, or public safety.
- There is limited opportunity for expanding public access and recreation along the Illinois coast because of the built up nature of the coastal setting. However, as land uses change along the Illinois shore, opportunities may develop to improve upon recreation and public access.
- The inland waterways, Lake Calumet, and the Calumet River may provide the greatest opportunities for improving pedestrian public access and watercraft public access. These waterways offer intra-urban recreational opportunities as well as access and recreation links between these inland waters and the Lake Michigan coast. However, efforts to enhance or increase public access/recreation along these water areas must take into account the primary roles of these waterways in storm and wastewater management and for commercial uses.
- Substantial recreational value is also derived from improving and protecting our natural areas and cultural resources. Substantial value is also added with improvements in water quality. Proper site maintenance, litter control and cleanliness of site facilities enhance the recreation experience.

Below are several general topic areas that were identified as meriting special attention to meet the demands for recreation and public access:

- Beach Access
- Public Transportation to Beaches and Parking Improvements
- Beach Protection and Nourishment
- Public Lakefront and Ravine Parks
- Bike and Hiking Trail Systems including arterial street crossings
- Marinas, Boat Harbors and Boat Launch Facilities
- Kayak and Canoe Access
- Recreational Fishing Access
- Offshore Fish Habitat
- Offshore Scuba Parks
- Lakeshore and Inland Waterways Integration

The *Public Access and Recreational Resources* issue paper provides further information and assessments of various recreational and public access needs along with specific area opportunities that may exist. Four central elements for proper planning and management of public access and recreation areas were identified in Chapter 5. These elements are briefly mentioned as a guide for addressing this AOC:

- Maintaining existing access and recreation through necessary repairs and proper maintenance is prudent coastal stewardship. Changes on this urban landscape are continual and often rapid, requiring consideration of potential effects to existing coastal access and recreation resources.
- Enhancing existing access and recreation opportunities such as measures for compliance with the ADA and multilingual signage. These enhancements can have a variety of facets such as increasing user capacity, updating infrastructure, and improving site landscaping and/or aesthetics, which require an appropriate balance across user interests.
- Identifying potential new access and recreation venues such as redeveloping former commercial, industrial or transportation-related land for public access and recreation are critical to seeking out opportunities and achieving the long-term goals and demands.
- Planning for new access and recreation is necessary to meet the demand of continuing growth in an urban population interested in water-related recreational activities. Developing a long-term regional plan will require interaction and communication between state agencies, local governments, industries, and planning groups.

In summary, recreational resources within the coastal zone are directly influenced by their relationship with Lake Michigan and the inland waterways. These resources not only benefit the coastal communities in Lake and Cook Counties but also are of benefit to the millions of visitors each year to the Chicagoland area. Improving public access and recreational resources provides immeasurable benefits in terms of the quality of life and the attractiveness of these areas as places to live. Improvements to these resources can also greatly add to the economy of the area. For example, better public transportation and access to recreational areas promotes the likelihood that more people will be attracted to and use those resources, and improve the economy of the area. There are considerable planning and management challenges to keep up with the increasing demand for better public access and recreational opportunities. New access and recreation resources will continue to be in demand with the continuing growth in this urban population. The ICMP can assist communities in their planning efforts and could provide a unique role in assisting in the integration of community actions where the benefits and impacts are regional in nature.

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#### **4. Areas where development and facilities are dependent upon the use of, or access to, coastal waters for industrial or commercial use and development**

The rapid growth of Chicago to one of the world's largest metropolitan areas may be attributed to its achievements in creating a navigable water access route from the Great Lakes to the Illinois River and in creating an efficient rail transportation system. The completion of the I&M Canal in 1848 provided a direct water link between the Great Lakes and the Mississippi River aiding new settlers in getting their surplus farm products to markets in the East. The I&M Canal, which followed the completion of New York's Erie Canal in 1825, helped to shift the Midwestern trade center from St. Louis to Chicago in providing a canal system that would link the west to the east, particularly to New York City. Lumber, meat, and grain products were the most important commodities that were first shipped across the Great Lakes and down the Erie Canal to New York City.

Chicago's trade dominance in the continental interior and to the Far West was triggered in the 1850s with the creation of a long-distance and radiating railroad system. Chicago became the trade center for farm products and farm machinery from the Midwest, for the lumber industry, the meatpacking industry and for products and resources that were produced in Chicago. Chicago became one of the great railroad cities in the world and by the 1890s had become a national center both economically and culturally.

Technological advancements in the agriculture, meatpacking, and steel-making industries had a tremendous effect on the growth of Chicago. Though Chicago had become the livestock center of the nation with the Union Stock Yards in 1865, it established itself as a major manufacturing meat center with the development of the refrigerated railroad car and a nationwide distribution system. With Chicago's excellent location for receiving northern ore and its excellent transportation system, Chicago also became a major steel producing center by the late 1800s.

The creation of the meatpacking and steel-making mass production industries created a huge market for unskilled labor, adding to the development of Chicago as an immigrant and working class city, having a ready pool of labor. Before 1880, Chicago's steel industry was located along the North Branch of the Chicago River. However, the industry's growth and demand for mass production labor required the steel industry to move to the mouth of the Calumet River in South Chicago. The South Chicago plant was one of the most modern and efficient steel production plants in the country, encompassing approximately 260 acres by 1898. The need for large amounts of unskilled labor necessitated the development of cheap housing in the immediate vicinity of the new plants, creating large working class districts near the stockyards and steel mills. (Above Historical Source: "History of Chicago from Trading Post to Metropolis," Roosevelt University Chicago History)

The above historical information highlights the importance of water access and coastal water dependency for commerce, trade and economic development in the Chicago area. Chicago has been referred to as "America's crossroads," where all modes of travel and freight movement intersect. Five federal highways and six major railroads pass through Chicago. While the meatpacking and steel-making industries have experienced dramatic changes, Chicago's economy is still directly tied to its central location, its transportation infrastructure, and its port facilities.

Waterway transportation is the most efficient method of transportation per unit cost and dramatically reduces the number of trucks on the road and environmental impacts associated with alternate truck traffic and congestion. The Port of Chicago remains the link between the inland-river system and the Great Lakes and yearly moves over 26 million tons of natural resources and other goods. In a survey conducted for 2002, it was estimated that 30,000 jobs in the area were related to Port activities.

This general APC includes ports and harbors, port loading facilities, docking and mooring areas, shipping and navigation channels, brownfields adjacent to the lake or shipping channels, prime industrial and urban waterfront areas, and associated dependent facilities. The geographic areas that contain these water dependent facilities include the Calumet Harbor; Lake Calumet; the Calumet River; the ICMP corridor sections of the Little Calumet and Grand Calumet Rivers; the Chicago Harbor; the ICMP corridor sections of the Chicago River and its branches; the North Shore Channel; Wilmette Harbor; Waukegan Harbor; the Waukegan Lakefront, and North Point Marina.

It is also not surprising that these geographic areas contain most of the resource issues identified as meriting special program attention, being water quality; erosion; habitat; public access; recreation; and land acquisition opportunities. These coastal water dependent areas contain the controlling structures separating Lake Michigan and the inland waterways, and the routes controlling effluent discharges and storm runoff. They also contain the connecting routes for invasive species between the Great Lakes and the Mississippi River. Constraining factors include the U.S. Supreme Court Decree limiting diversions, the demand for Lake Michigan water supply, navigation, and public safety.

Land use decisions in these coastal water dependent areas involve analysis of the complex resource-related issues along with the weighing of the competing demands from the many different interests for these limited areas and resources. The desire and need for maintenance or development of industrial areas competes with the desire and need for commercial development. In addition, they each compete with the desire and need for open space, recreation, and public access demanded by the ever growing population. In meeting such demands is the potential for conflict with the preservation of natural areas, historic structures and cultural features. These competing interests and complex issues require multi-objective planning, most often requiring tradeoffs and a balancing of interests in seeking to gain the greatest community and societal benefits from these areas. There are many organizations working on these issues that have adopted plans and vision statements for land use and development.

**5. Areas needed to protect, maintain or replenish coastal lands and significant resources subject to storms, floods, erosion, and settlement, including floodplains, wetlands, sand dunes, natural areas, offshore sand deposits, recreational areas, ports, lakefronts, marinas, public utilities, roads, infrastructure, and historic structures**

This general APC is provided to afford ICMP assistance on issues related to the protection of coastal lands and significant resources from the forces of nature. It includes conditions that may occur from precipitation and wind, including conditions that may occur due to changes in lake level and climate. This APC includes the issue paper descriptions on coastal shoreline erosion, erosion in the ravine systems and erosion occurring in the Waukegan River. It also includes the issues provided for Illinois Beach State Park and North Point Marina, including the Dead River and Kellogg Creek watersheds and in issue papers describing wetlands, floodplains, natural areas, ports, infrastructure and public recreational facilities.

**APC Summary**

The importance of APC designation is the focus of attention the ICMP will give to these areas in providing technical assistance, governmental coordination, and/or ICMP grants in assisting to address the issues and significance of these areas. The ICMP will prioritize attention to these areas with input from the TAC and the CAG. Broad guidelines for priority attention to an APC include the following:

- The importance of the issue with respect to its urgency and impact upon failure to take action
- The degree of regional benefit the action will provide
- The cost benefit ratio of the proposed effort
- The likelihood of achieving beneficial results in the manner and effort proposed

## **APR Description**

The following provides a general description for establishment of Areas for Preservation and Restoration (APR). Section 923.22 of the CZMA regulations states *the management program must include procedures whereby specific areas may be designated for the purpose of preserving or restoring them for their conservation, recreational, ecological, historical or esthetic values, and the criteria for such designations.*

APR establishment provides the opportunity for a specific area designation process, whereby a specific area may be preserved or become eligible for restoration and assistance from the ICMP. The means to doing so will be through enforceable management criteria and/or legal instruments. Future specific APR designation will provide the opportunity for the ICMP to address certain situations that may not be apparent at this time. The ability to nominate a specific APR provides the needed tool to enable ICMP assistance. For example, a specific area may be determined ineligible for ICMP assistance or funding due to land use or a public access constraint. A conservation easement or agreement to a certain set of conditions could provide the means to make the area eligible for the ICMP. APR designation will provide for ICMP technical or grant assistance. The criteria for designation and nomination guidelines for APR designations are discussed below.

### Criteria for APR Designation

1. The specific area for designation must be located within the ICMP Boundary.
2. The specific area must meet at least one of the general APC categories.
3. The specific area must require additional management criteria or a legal instrument for preservation or restoration of its values.
4. The specific area must be either on publicly controlled lands or a legal instrument must be provided that ensures the purpose of APR designation is carried on through perpetuity.
5. The methods proposed to preserve or restore a specific area must be technically and financially feasible and achievable.
6. The ICMP will only consider voluntary requests from the landowner(s) of the specific area needed for preservation or restoration.
7. The ICMP will only consider an APR designation from landowner(s) who agree to comply with all legal instruments and actions necessary to meet the objectives to preserve or restore the area.

### Designating APRs

- a) The ICMP will only review nominations that meet all of the criteria for designation as listed above.
- b) The ICMP will seek input and comments from the TAC, the CAG and any state or local governmental agency as needed to ensure that the criteria for designation has been met.
- c) Nominations for designating an APR will be subject to the final approval of the IDNR Director.